EFFECT OF TRIPLE INTERVENTIONAL PACKAGE (TIP) ON STRESS, ANXIETY, DEPRESSION, QUALITY OF SLEEP, SELF ESTEEM AND SELECTED PHYSIOLOGICAL PARAMETERS AMONG PATIENTS WITH ALCOHOL USE DISORDER

SYNOPSIS

of the thesis for the award of Degree of

DOCTOR OF PHILOSOPHY

in

NURSING

Submitted to

SRI BALAJI VIDYAPEETH

A Deemed to be University (NAAC A++) PUDUCHERRY – 607402, India

by

Mrs. PRABAVATHY S

(UIN: 1805001013)

Under the Guidance of

Dr. RENUKA K

Guide/Convener

Sri Balaji Vidyapeeth, Puducherry

Sri Balaji Vidyapeeth

Puducherry

September, 2023

EFFECT OF TRIPLE INTERVENTIONAL PACKAGE (TIP) ON STRESS, ANXIETY, DEPRESSION, QUALITY OF SLEEP, SELF-ESTEEM AND SELECTED PHYSIOLOGICAL PARAMETERS AMONG PATIENTS WITH ALCOHOL USE DISORDER

Dr. RENUKA.K
Ph.D (Nursing) Guide
SRI BALAJI VIDYAPEETH (SBV)
PUDUCHERRY.

Dr. Renuka K
Guide/Convener
Sri Balaji Vidyapeeth, Puducherry.

Dr. Anasuya Ravikanti
Co-Guide (External)
Founder Director,
Swarajeevani Center for Music Therapy,
Hyderabad.

Prof. Dr. Avudaiappan
Co-Guide (Internal)
(Subject Expert)
Dept. of Psychiatry, MGMCRI,
SBV

Dr. AVUDAIAPPAN S
Reg. No. 82376 (TNMC)
Professor
Dept. of Psychiatry, MGMCRI

Dr. Jayalakshmi
External Subject Expert (Nursing)
Reader, HOD,
Dept. of Mental Health Nursing
Govt. College of Nursing, Chidambaram

Mr. Vijayaraghavan
External Subject Expert
Clinical Psychologist
JIPMER.

VIJAYARAGAVAN .D
Clinical and Social Psychologist -cum-tutor
Regd. No: RCI CRR :A10867
Dept. of Psychiatry
JIPMER, Puducherry

TABLE OF CONTENTS

S.NO.	TOPIC	PAGE NO.
1.	INTRODUCTION	1
2.	REVIEW OF LITERATUE	8
3.	RESEARCHMETHODOLOGY	15
4.	ANALYSIS AND INTERPRETATION OF DATA	24
5.	MAJOR FINDINGS AND DISCUSSION	33
6.	SUMMARY AND CONCLUSION	38
	REFERENCES	39
	APPENDIX	41

CHAPTER I

INTRODUCTION

1.1 Back ground of the Study

Alcohol use disorder is called a "dual disease" and also called as psychoactive substance, since it includes both mental and physical components.[1]**.** It is a significant health problem in today's Scenario.[2]. Globally, 2 billion people who consume alcoholic beverages and 76.3 million have a diagnosable alcohol-use disorder-WHO. According to the National Family Health Survey-5 (NFHS-5), men consume more alcohol in rural India than in urban India. Overall, 19% of men who are 15-22 years old and above drink alcohol (i.e.) 19.9% (rural) and 16.5% (urban) respectively.[3].

The World Health Organization (2022) states that 3 million deaths in that 320 000 are young people and 7.7% of all global deaths among men are attributed to alcohol consumption.[5,6] Depression is the common and serious mental illness that negatively affect 30%-40% of alcoholics.[9]Stress is the triggering factor of alcoholism ,Stress is associated with alcohol use, which is typically characterized as a coping strategy. Stressed men are 2.5 times more likely to have alcohol use disorders.[12] The National Epidemiological survey reports there is a high rate of co-morbidity that has been found between alcohol-use disorders and the number of mood and anxiety disorders .Alcohol and self-esteem mutually impact one another. The research studies shows that 75% of alcoholic dependants having low self-esteem.[14]..Alcohol consumption interferes with sleep for 27.7% of users, and also reports 47%–60% of those who drink alcohol had poor sleep quality . [16].According to WHO, alcohol is implicated as a risk factor in over 60 health disorders including high blood pressure, stroke, coronary heart disease, liver cirrhosis and various cancers.[17]. Studies have found that regular heavy drinking can cause episodes of tachycardia (i.e.) heart rates spiked 14 percent and remained elevated into the morning .Alcohol decreases respiratory rate, airflow and oxygen transport, hence increasing many symptoms of pulmonary disease. The research study found that while consuming alcohol increases the risk of respiratory rate by 25%.[22]

Complementary therapy is an integral part of wider Addiction Treatment Programme in which People trying to overcome alcohol use disorder. Here are some of the choices like 4, 7, 8 breathing techniques, Receptive Music therapy and Assertive Training. 4-7-8 breathing technique involves breathing in for 4 seconds, holding the breath for 7 seconds, and exhaling for 8 seconds respectively which aims at reducing stress, anxiety, depression and facilitating easier sleep and also improve the self - esteem. So many research studies shows that 68-73% success rate in treating people suffering from psychological problems.[23,24] Music is a systematic process of intervention helps the client to promote mental well-being. These include managing stress and anxiety, reducing symptoms of depression, improving self-esteem, quality of sleep and physiological parameters. About 10 / 12th of alcoholic patient were treated with listening to the music. [25]

Assertiveness training and relaxation techniques tend to calm people who are overwhelmed by stress, while rhythmic exercise improves the psychological and physical health of those who are depressed. The many research study indicates that 56.67% alcoholic patients experience problems related to being non-assertive. Evidence suggests that approximately 90 percent of alcohol use disorder patients are likely to have one episode of relapse over the 4-year period following treatment. .[26] So triple intervention package plays a major role in de-addiction centers of patient with alcohol use disorder.

1.2 Need for the Study

Depression and Alcohol Use Disorder

At Global level -The National Institute on Alcohol Abuse and Alcoholism states that for adults, approximately 11.2 million adults (approximately 7% of the US population) are diagnosed with an alcohol use disorder. . [142] **In India -** Indian journal of psychiatry nursing reports that in Maharashtra there was 62.5 million alcohol users in India, of which 10.6 million are dependent users. Up to 40% of people who drink heavily have symptoms that resemble a depressive illness. However, when these people are not drinking, only 5%–10% have depressive symptoms [144,145].**In Tamilnadu -** Bio Med Centre reported that in Chennai, two fifth fold increase in depression was observed in men who were alcohol-dependent when compared to non-drinkers.

[149,150] **In Puducherry** International Journal of Current Research reported that 42.4 % had severe depression due to alcohol use disorder. [152]

Anxiety and Alcohol Use Disorder

At Global Level - According to the Anxiety and Depression Association of America (2022), 6.8 million adults, or 3.1% of the population in the United States, are suffering from Generalized Anxiety Disorder; and recent statistics show that approximately 29% of Americans aged 18 and over reported having anxiety disorders. [153] **In India -**Indian journal of psychiatry nursing reports that, 60% of alcohol dependent patient had anxiety disorder in Maharashtra. [144]

In Tamil Nadu-International Journal of Applied Research says that, 63.3% of the patients with alcohol use disorder had perceived high level of anxiety in Madurai. [150]

In Puducherry-Pondicherry journal of nursing reveals that 52.5% having severe level of anxiety among alcohol use disorder. . [164]

Stress and Alcohol Use Disorder

In worldwide -A recent research study by YouGov has revealed that almost 60% of adults in the UK are drinking alcohol in order to cope with the stress of everyday life. [165] **In India** -IOSR Journal of Dental and Medical Sciences reveals that 40.0% with moderate stress and 16.7% with severe stress in tezpur. . [168] **In Tamil Nadu** - International Journal of Applied Research says that, 58.3 % of the patients with alcohol use disorder had perceived high level of stress in Madurai. [150] **In Puducherry** - International Journal of current Research states that 54.5% have extremely severe stress and 45.5% had severe stress on patient with alcohol use disorder. [151]

Self – Esteem and Alcohol Use Disorder

In Globally- American journal of orthopsychiatry revealed that, 52.8% of men with both factors like alcohol consumption and alcohol-related problems entered into the model, intrapersonal self-esteem was negatively associated with alcohol consumption and alcohol-related problems. . [171] **In India** - International Journal of Research in Medical Sciences (2020) reports that 21.5% had low self esteem among patient with alcohol use disorder. [168]

In Puducherry - International Journal of Applied and Advanced Scientific Research (IJAASR) reveals that 20% of patient with alcohol use disorder having low self esteem. . [173]

Quality of Sleep and Alcohol Use Disorder

In Globally - JMIR Mental Health compared sleep quality among subjects who consumed different amounts of alcohol in Finland. The findings are as follows:

Low amounts of alcohol (fewer than two servings per day for men or one serving per day for women) decreased sleep quality by 9.3%. Moderate amounts of alcohol (two servings per day for men or one serving per day for women) decreased sleep quality by 24%. High amounts of alcohol (more than two servings per day for men or one serving per day for women) decreased sleep quality by 39.2%.[62] **In India-** Journal of Nursing Research reveals that 47%–60% of people who consume alcohol report poor sleep quality. Moreover, people with high levels of alcohol consumption revealed decreased slow-wave activity during non-REM sleep in Nepal. [181] **In Puducherry** - National medical journal of India states that the prevalence of poor quality of sleep from various community-based studies ranges from 26% to 46.6% in Ramanathapuram Thondamanatham, Pillayarkuppam and Thutipet. [183]

Selected Physiological Parameters and Alcohol Use Disorder

In Globally - American Addiction Center reports that in the U.S., about 75 million adults have high blood pressure and heart rate (or 1 in every 3 Americans) and it accounts for an estimated 54% of all strokes and 47% of all ischemic (reduced blood flow) heart disease events. Alcohol use can contribute to high blood pressure .American journal of respiratory and critical care medicine depicts that mortality rate of 30% – 50% are affected with alcohol associated with respiratory disorder. [83]

In India- International journal of environmental research and public health reports that the prevalence of hypertension and tachycardia was observed to be the highest among those men (27.1%) who were daily consumers of alcohol. [186]

In Tamilnadu - International journal of community medicine and public health reported that in kanchipuram district those who consume alcohol, 18 (30.5%) had hypertension. [187]

In Puducherry - Journal of family medicine and primary care reports that the majority had alcohol dependence problems and about one-fifth had chronic health problems, tachycardia, and hypertension. [87]

As a researcher, I was much interested in taking steps to improve the mental well being of patients with alcohol use disorder by using Triple Interventional Package (TIP) in order to reducing the depression, stress, anxiety andImproves the self – esteem, selected physiological parameters (Blood Pressure, Pulse Rate, Respiration Rate) and Enhances the quality of sleep in selected de – addiction centres at Puducherry.

1.3 Statement of the Problem

Effect of Triple Interventional Package (Tip) On Stress, Anxiety, Depression, Quality of Sleep, Self Esteem and Selected Physiological Parameters Among Patients With Alcohol Use Disorder.

1.4 Aim of the Study

The aim of the study is to evaluate the effectiveness of Triple Interventional Package (TIP) on Stress, Anxiety, Depression, Quality of Sleep, Self esteem and Selected Physiological Parameters among Patients with Alcohol Use disorders

1.5 Objectives of the Study

- To assess the level of stress, anxiety, depression, quality of sleep, self esteem among Patients with alcohol use disorder
- To assess the physiological parameters (pulse, respiration, Blood pressure) of the Patients with alcohol use disorder
- To evaluate the effectiveness of Triple Interventional Package (TIP) on stress, Anxiety, Depression, Quality of Sleep, Self esteem and selected physiological parameters among patients with alcohol use disorder
- To find out the relationship between stress, anxiety, depression, quality of sleep, self esteem and selected physiological parameters among Patients with alcohol use disorder
- To associate the pretest level of stress, anxiety, depression and quality of sleep, self esteem and selected physiological parameters with the selected demographic variables.

1.6 Hypotheses

All hypotheses were tested at a 0.01 level of significance

- **H_1 -** Level of Stress, Anxiety, depression, quality of sleep and Self esteem differ among patients with alcohol use disorder before and after administration of Triple Interventional package
- **H_2** –Physiological parameters of patient with alcohol use disorders differ before and after administration of Triple Interventional package
- **H_3**-Correlation exists between the level of Stress, Anxiety, depression, Quality of sleep, Self esteem and selected physiological parameters among patients with alcohol use disorder
- **H_4 -** Association exists between the level of Stress, Anxiety, depression, Quality of sleep, Self -esteem, physiological parameters with their selected demographic variable

1.7 Study Variables

The study includes the following variables:

- **Independent Variables** - Triple Interventional Package including 4,7,8 Breathing Technique, Receptive music listening and Assertive Training
- **Dependent Variables** - Depression, Anxiety, Stress, Quality of Sleep, Self-Esteem and Selected Physiological Parameters

1.8Assumptions

- The Alcohol Use Disorders patients experience Stress ,Anxiety, Depression which leads to poor quality of sleep, and low self esteem.
- The application of Assertive training, Receptive music listening and 4,7,8 Breathing technique has a positive effect on reducing the stress, anxiety, depression and improve the quality of sleep, self esteem and physiological parameters among Patients with alcohol use disorder.
- Experimental group receiving a Assertive training, Receptive music listening and 4,7,8 Breathing technique will demonstrate significant benefits compared to Control group.

1.9 Delimitations

The study was delimited in the following ways:

The study was delimited to selected De-addiction centers, Puducherry.

The study was delimited to sample size of 150

The study was delimited to one year period of data collection.

1.10 Summary

This chapter introduces the research study, covering the back ground and rationale for conducting the study .The chapter presents the need for the study, the statement of the problem, aims, objectives, hypotheses, study variables, assumptions and delimitations.

CHAPTER II

REVIEW OF LITERATUE

Review of literature is an important steps in the development of research projects. The literature review is presented in both narrative and systematic review formats, with the available literature organized and presented under the following subheadings:

- **Studies related to level of stress, anxiety, depression among patient with alcohol use disorder**
- **Studies related to level of quality of sleep among patient with alcohol use disorder**
- **Studies related to level of self-esteem among patient with alcohol use disorder.**
- **Studies related to level of Physiological parameters (Pulse, Respiration and Blood pressure) among patient with alcohol use disorder**
- **Studies related to Effectiveness of triple interventional package (Breathing technique, receptive music listening and assertive training) on Stress, anxiety, depression, quality of sleep, self-esteem and selected physiological parameters among patient with alcohol use disorder.**

2.1 Studies related to level of stress, anxiety, depression among patient with alcohol use disorder

A descriptive study was conducted in 2018 among 60 respondents at a voluntary de – addiction center in Madurai selected by using convenient non random sampling techniques. The data was collected using Depression, Anxiety, Stress Scale (DASS). The findings of this study revealed that more than half of the respondents perceived high level of depression, stress and anxiety. With regard to the dimension of depression, exactly 3/5th of the respondents had high level of depression, 63.3% of the respondents perceived high level of anxiety and 58.3% of the respondents had high level of stress which was not significant at $p > 0.05$. [28]

2.2 Studies related to level of quality of sleep among patient with alcohol use disorder

A cross sectional study was conducted in 2021 to assess the association between total alcohol intake specific alcoholic beverages and sleep quality in a community-based cohort. The samples were 11,905 participants. Alcohol consumption (amount and frequency intake) and alcoholic beverage type were collected in 2006 (baseline) and 2012. Overall sleep quality was measured in 2012 and included four sleep parameters (insomnia, daytime sleepiness, sleep duration, snoring/ obstructive sleep apnoea). Higher alcohol consumption in 2006 was associated with worse overall sleep quality ($p < 0{\cdot}001$). Participants who consumed hard liquor, but not wine and beer, were more likely to have worse overall sleep quality when compared with people who did not consume liquor (adjusted mean differences = 0·18; 95 % CI: 0·13, 0·23 with $P < 0{\cdot}001$). This study concludes that higher alcohol consumption was associated with poorer sleep quality and higher odds of having snoring and short sleep duration.[29]

2.3 Studies related to level of self-esteem among patient with alcohol use disorder

The descriptive design was conducted in 2020 - self – esteem - 60 alcoholics in psychiatric ward, gastroenterology - St. Johns Medical --College Hospital, Bangalore. Rosenberg Self Esteem scale - age group of 36-55 - 60%. Males - Unskilled workers contributed 75% of alcoholics, - no family history - 56.6%. - beginners - 12-24 years - old people contributed 65%. 71.6% - 100-300ml of alcohol. People who earned 5000-20000 contributed 71.6%. The age, education, occupation and family history of the alcoholic peoples have no associations with the self-esteem whereas the age of beginning of alcohol, quantity of consumption and income have association with self-esteem. .[30]

2.4 Studies related to level of Physiological parameters (Pulse, Respiration and Blood pressure) among patient with alcohol use disorder

The systematic reviews were conducted in 2020 on effect of alcohol on blood pressure. The search methods based on the Cochrane Hypertension Specialized Register; the Cochrane Central Register of Controlled Trials, in the Cochrane Library; Medline; Embase; the World Health Organization International Clinical Trials Registry Platform. The selection criteria was based on the 32 Randomized controlled

trials (RCTs) involving 767 participants .The Data was collected using two review authors (ST and CT) independently extracted data and assessed the quality of included studies. The result of the study was most of the participants were male (N = 642) and were healthy. The mean age of participants was 33 years, and mean body weight was 78 kilograms. High-dose alcohol 13 hours after consumption (4 RCTs, N = 154) increased SBP by 3.7 mmHg, DBP by 2.4 mmHg and HR by 2.7 bpm (95% CI 0.8 to 4.6) (moderate-certainty evidence for all).The study concluded that the high-dose alcohol has a biphasic effect on BP; it decreases BP up to 12 hours after consumption and increases BP > 13 hours after consumption. High-dose alcohol increases HR at all times up to 24 hours. .[31]

A Systematic Review and Meta-analysis was conducted in 2021 on The Impact of Alcohol on Breathing Parameters during Sleep among alcohol dependence patients. Randomized controlled trail methods was adopted for this study. The data was collected by using Ovid Medline, Embase and PsycINFO databases. The result shows that meta-analysis of 14 eligible studies was 71.9% males found that AHI increased significantly after alcohol administration. Additionally, a significant increase in respiratory event duration (WMD=0.86; 95% CI=0.18 to 1.55, I2=19%) were noted. The study concluded that alcohol is a modifiable risk factor that can result in the development or worsening of respiratory rate. .[32]

2.5 Studies related to Effectiveness of triple interventional package (Breathing technique, receptive music listening and assertive training) on Stress, anxiety, depression, quality of sleep, self-esteem and selected physiological parameters among patient with alcohol use disorder

A quasi experimental study was conducted in 2019 among 60 alcoholic patients (30 in control group and 30 in experimental group) at Freedom Care Foundation and Wisdom Hospitals, Chennai were selected by using purposive sampling technique. The data was collected by using Rosenberg Self-Esteem Scale. Assertiveness training was given to the alcoholic patients was given for one hour session per day. The result shows that the Twenty percent of them had high self-esteem after AST which was found statistically significant at $p< 0.001$. There was a significant association between the duration of alcohol dependence ($\chi 2 =4.48$, df=1) at $p <0.05$. The study concluded that assertiveness training which is a behavioural

therapy intervention can be effectively utilised to help alcoholic clients achieve a greater degree of self-esteem and emotional freedom. .[33]

A quasi experimental study was conducted in 2022 on effect of an assertiveness program on the drug use tendency, mental health, and quality of life among 70 clinical students attending Ayatollah Kashani and Hajar teaching hospitals of Shahrekord were included into the study and randomly assigned into an intervention group and a control group. The assertiveness training program was implemented for eight 1-h sessions (one session per week for 2 months) for the intervention group, while the control group received no programs. Both study groups completed drug tendency questionnaire, depression, anxiety and stress scale, and quality of life questionnaire in pre test, post test, and 2-month follow-up. The study result shows that he mean scores of stress (P = 0.31), anxiety (P = 0.29), depression (P = 0.43) showed no statistically significant difference between the intervention and control groups in the pre test, but the scores of the stress, anxiety, and depression were statistically lower 2-month follow-up ($P < 0.05$). The study concluded that assertiveness skill training as a preventive program can reduce the students' tendency to addiction and improve their mental health and quality of life. .[34]

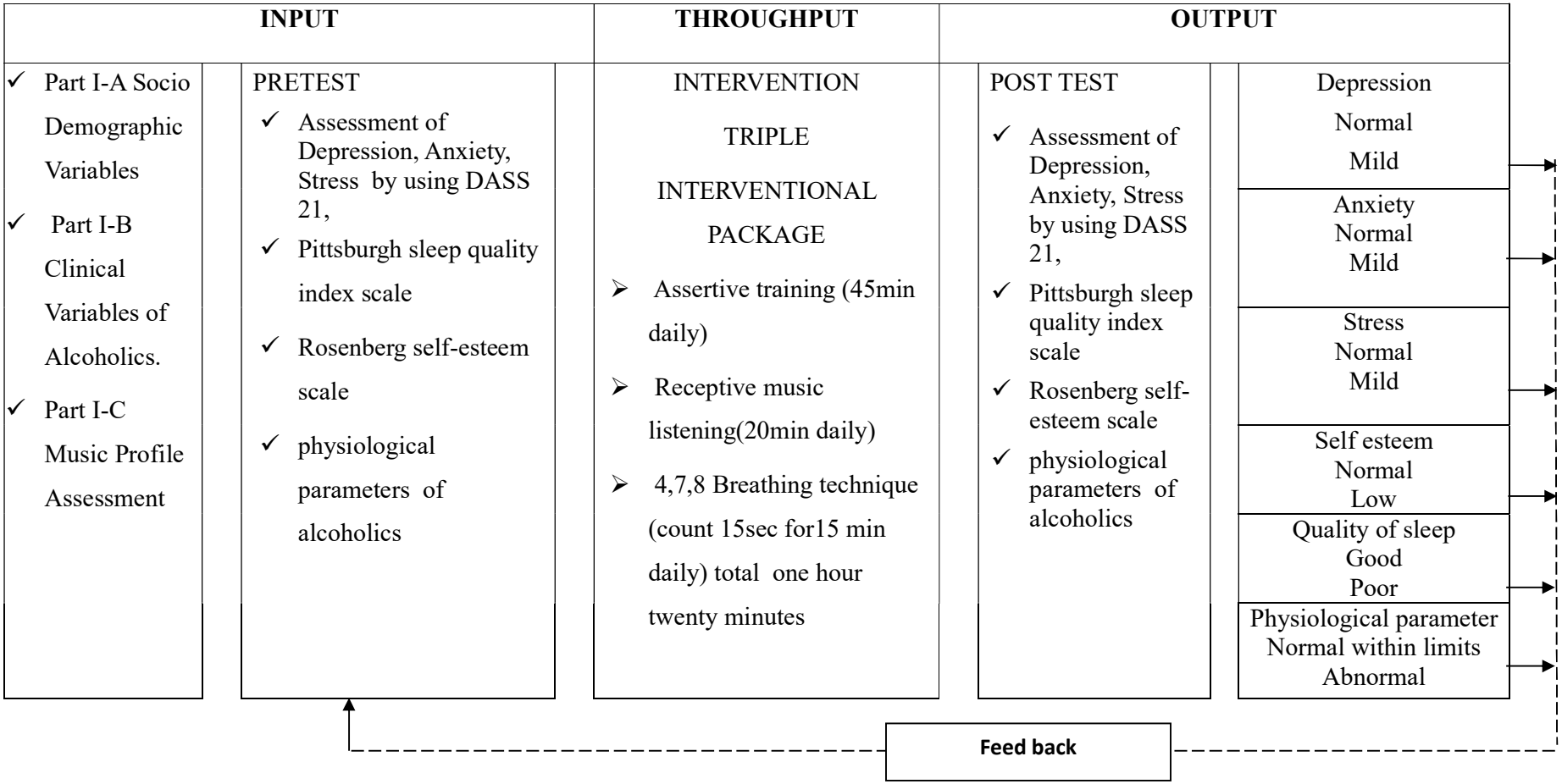
A pilot study was conducted in 2013 on effects of Music Therapy Interventions on Depression, Anxiety, Anger, and Stress among 36 male Alcohol-Dependent Clients. The music therapy program was comprised of singing, music listening, and playing instruments. Each activity was conducted for 2 weeks and for 4 sessions. The data was collected by using DASS – 21 scale. The study result shows that depression, anxiety, and stress were significantly reduced after participating in the music therapy sessions ($p< 0.05$). In the singing activity, significant differences in depression and stress levels were found between participant-selected songs and therapist-selected songs ($p<0.001$). .[35]

The quantitative study was conducted in 2022 on effects of sleep deprivation and 4-7-8 breathing control on heart rate variability (HRV), blood pressure (BP), fasting blood glucose (FBG), and endothelial function among 43 healthy participants aged 19–25 years were classified into two groups: Twenty two in the with sleep deprivation group and 21 in the without sleep deprivation (control) group. Subsequently, participants practiced 4-7-8 breathing control for six cycles /set for

three sets interspersed between each set by 1-min normal breathing. The HRV, HR, and BP variables and FBG were not significantly different between the two groups. However, endothelial function was significantly lower in the sleep deprivation group than that in the control group ($p < 0.05$). In response to 4-7-8 breathing control, low- and very-low- frequency powers significantly decreased ($p < 0.05$), whereas high-frequency power significantly increased ($p < 0.05$) in the control group. Moreover, time domain, total power, and very-low- frequency power significantly decreased ($p < 0.05$) in the sleep deprivation group. Both groups had significantly decreased HR and systolic BP ($p < 0.05$). HRV, HR, and BP variables showed no significant differences between the groups. Furthermore, 4-7-8 breathing control can help participants improve their HRV and BP, particularly in those without sleep deprivation.[36]

CONCEPTUAL FRAMEWORK

GENERAL SYSTEM THEORY- LUDWING VON BERTALANFFY (1968)



2.7 Summary

In conclusion, The study proves that Triple Interventional Package (TIP) (4, 7, 8 breathing techniques, receptive music listening, assertive training) was statistically significant in reduction of stress, anxiety, depression and improves in self esteem, selected physiological parameters (blood pressure, respiration rate and pulse rate) and enhances the quality of sleep among the patient with alcohol use disorder.

CHAPTER III

RESEARCHMETHODOLOGY

This chapter deals with the methodological approach of the study. The purpose of the study is to evaluate the effectiveness of Triple Interventional Package (TIP) on Stress, Anxiety, Depression, Quality of Sleep, Self-esteem and Selected Physiological Parameters among Patients with Alcohol Use disorders.

3.1 RESEARCHAPPROACH

The choice of research approach is the first step in conducting a research study, and it directs the researcher's analysis and interpretation of the findings. A quantitative research approach was used for the present study

3.2 RESEARCH DESIGN

The research design used in the study was experimental research design-pre-test and post-test control group design.

3.3 SETTING OF THE STUDY

Research Setting is the physical condition in which data collection takes place in a study. The selection of the centre for the present study is on the basis of Availability of subjects, Feasibility of conducting the study, Economy of time and money. The study was conducted in various de-addiction centres in Puducherry. Formal permission was obtained from various de-addiction centres in Puducherry. Each centres contains 45 - 50 clients.

RANDAMIZATION

Random allotment of centers to experimental and control group through lottery methods. Six lots with centers name includes Serenity Deaddiction Centre, BarathaMatha Deaddiction Centre, Sakthi Deaddiction Centre, Hope Foundation Deaddiction Centre ,Mother Care Foundation Deaddiction Centre, Valluvam Deaddiction Centre were prepared. The first 3 picked up lot were allotted to experimental group, then next 3picked up lot were allotted to control group.

Experimental Group - 3 Centers (BarathaMatha Deaddiction Centre, Sakthi Deaddiction Centre, Mother Care Foundation Deaddiction Centre**) Control Group** - 3 Centers (Serenity Deaddiction Centre, Hope Foundation Deaddiction Centre, Valluvam Deaddiction Centre) Selected Deaddiction Centers at Puducherry.

3.4 POPULATION

A population is described as a group of people who share particular traits. The population for the present study was alcohol dependents from the age group of 20 - 55 years old in Puducherry.

3.5 SAMPLE, SAMPLE SIZE, SAMPLE SIZE CALCULATION, AND SAMPLING TECHNIQUE

SAMPLE

Samples are the subject of the population selected to participate in a study. The sample for the present study was alcohol dependents who are getting treatment in selected de-addiction centres at Puducherry.

In each selected setting, the samples those who met the inclusion criteria were selected by using cluster sampling .

SAMPLE SIZE

The sample size was calculated using power analysis with the confidence of 90 %.150(75 Experimental group and 75 Control group) sample was selected.

SAMPLE SIZE CALCULATION

Sample size was calculated based on the review of literature from JyothiS. Sunandha and Dr. Vijayalakshmi K conducted the study on Effect of Assertiveness Training on Assertiveness skills among Alcoholic Patients of selected De-addiction centers in which result shows that the 20% of them had high self- esteem after intervention. By assuming that as alpha = 0.01, beta = 0.2, and considering 10% of dropout, it comes sample size 75 per group. Minimum improvement 10% we are assuming that effect. (Experimental-75& Control-75).

$$n = \left[\frac{1+r}{r}\right]\frac{\left(Z_{1-\alpha/2} + Z_{1-\beta}\right)^2}{d^2} + \frac{Z^2_{1-\frac{\alpha}{2}}}{2(1+r)}$$

$$d = \frac{\mu_2 - \mu_1}{\sigma}$$

Where,

- Alpha (α) = 0.05
- Beta (β) = 0.2
- Effect size (d) = 0.7
- Attrition = 10%

Since the sampling procedure is cluster random sampling,

We consider d.e is 2

n= n_1* d.e

n= 34* 2

n= 68 in each group

Considering 10% of attrition

n = n_1 + n_1 * 10%

= 68 + 68 *10%

= 68 + 6.8

= 74.8

= 75 in each group

Therefore**,** the total sample size is 150 (Experimental - 75 & Control -75)

SAMPLING TECHNIQUE

Sampling technique is defined as the process of selecting a group of people. Cluster random sampling technique was used to select the samples from the selected de-addiction centers at Puducherry for the present study.

3.6 CRITERIA FOR SAMPLE SELECTIONINCLUSIONCRITERIA

Alcohol dependents who have

- Male Alcoholic inmates who are between the age group of 20-55years
- DSM-5-Consumedmore alcohol or spent more time drinking than intended

- Male Alcoholic Inmates who Diagnosed as patients with Alcohol use disorder
- Male Alcoholic Inmates who under the treatmentfor1-3months in De-addiction centers
- Alcoholic inmates who had mild to moderate Stress, Anxiety, depression, poor quality of sleep and low Self-esteem.
- Willingness and interest of the participant with the given list of music.

EXCLUSIONCRITERIA

Alcohol dependents who have

- Severe/Extreme stress, anxiety and Depression
- Multiple drug dependence
- Multiple substance use disorder patients
- Having hearing impairment
- Who have psychiatric co-morbid illness (two or more disorders or illnesses occurring in the same person like major depression, substance use disorder with psychotic features and social phobia)
- Poor attitude towards listening to music.
- Who have severe medical uncontrolled and co-morbid illness.

3.7 MEASURES TAKEN TO AVOID BIAS

To avoid potential bias in the study, the participants and the statistician were kept unaware of the group they belonged to prevent bias in their responses or analysis. This approach, known as blinding or masking, helps ensure that the assessment and interpretation of outcomes remain objective. Additionally, during data collection and analysis, the groups were labelled as Group 1 and Group 2, further maintaining blinding to prevent bias from influencing the results. These measures are taken to avoid bias and enhance the reliability and validity of the study findings by minimizing potential subjective influences on the outcomes.

3.8 DATA COLLECTION INSTRUMENTS

DEVELOPMENTOFTOOL:

The tool was developed and standardized through an extensive review of the literature and discussions with experts in the field. It was carefully designed to capture the relevant variables and measurements required for the study. The tool consists of

three parts, each focusing on specific aspects of the research objectives. The development and standardization process ensured that the tool is reliable, valid, and capable of providing accurate data for the research study.

DESCRIPTIONOFTOOL

The tool consist of three parts.

PART I

Part I-A Socio Demographic Variables includes Age in years, Gender, Religion, Educational status, Marital status, Occupation, Residence, Type of Family, Socio economic status, Number of Children, Monthly Income, Family history of alcohol abuse or use disorders, History of chronic physical illness.

Part I-B Clinical Variables of Alcoholics includes Age At Starting of Alcohol, Precipitating Factor, Feeling When You First Consumed Alcohol, Frequency of alcohol consumptions, Amount Of Alcohol Consumed Per Day, Money Spent On Alcohol Consumption, Any Other Use of Substances, Associative Disturbances, Efforts To Quit Alcohol, History Of Abstinence, Relapse, Previous Deaddiction Admission, Duration of Stay.

Part I-C Music Profile Assessment includes Do you enjoy listening to music, Do you make an intentional effort to listen to music every day, how often do you listen to music, You listen to music when you feel, Are your feel stress free when you hear music.

PART:II

Part II-A - Rosenberg Self-esteem Scale

Part II-B - Depression Anxiety Stress – 21 Scale (DASS - 21)

Part II-C - Pittsburgh Sleep Quality Index Scale (PSQI)

PART:III

Physiological Parameters includes Pulse Rate, Respiration Rate and Blood pressure.

3.9 CONTENTVALIDITY

Content validity of Socio demographic variables, Clinical Variables of Alcoholism, Music Profile Assessment, Rosenberg Self – Esteem Scale, Depression, Anxiety and Stress Scale - 21 (DASS-21), Pittsburgh Sleep Quality Index Scale (PSQI) and selected physiological parameters was established with subject experts of various fields such as psychiatrist, psychologist, Statistician and Professors from mental health department in various institutions. The suggestions given by the experts were incorporated and the tool was finalized.

3.10 RELIABILITY

Rosenberg Self – Esteem, Depression Anxiety Stress- 21 Scale (DASS-21) and Pittsburgh Sleep Quality Index (PSQI). Test- retest and split-half reliability coefficient scores of Depression, Anxiety and Stress Scale (DASS-21) were **0.99 and 0.96** respectively.

Test and retest reliability of Pittsburgh Sleep Quality Index (PSQI) were **0.87 and 0.83** respectively .Reliability of the Rosenberg Self – Esteem demonstrates a Guttman scale coefficient of reproducibility of **0.92**, indicating excellent internal consistency.

The tools were found to be highly reliable and were suitable for use in the main study.

3.11 ETHICALCONSIDERATION

- Institutional Ethical committee clearance obtained.
- Written informed consent taken from the study subjects.
- The subjects involved in the study explained clearly of the purpose and objectives of the same.
- The subjects selected for the study assured of the confidentiality of the information provided to the researcher.
- It ensured that a prescribed intervention will not affect the normal work schedule of the subjects.

3.12 PILOTSTUDY

The pilot study is defined as a small scale version or trail run of the major study. It was conducted for one month (i.e.) from 1.08.2022 to 30.08.2022 in Mind

De-addiction Centre and N.B De-addiction Centre at Puducherry, after obtaining permission from the Chairman .Ten alcohol dependents for experimental group and ten alcohol dependents for control group who fulfilled the inclusion criteria were selected to determine the reliability of the instrument. After establishing a good rapport with the patients, the consent for participation in the study was obtained from them .A pre interventional group was assessed by using the structured questionnaire followed by the intervention (Triple Intervention Package) were performed for 21 days everyday 80 minutes, the post intervention was conducted on the 21st days. Data were analyzed by using descriptive &inferential statistics. The result of the pilot study revealed that the study was feasible and practicable and no modification is needed in the tool after pilot study.

3.13 PROCEDURE FOR DATA COLLECTION

- **Phase - 1:** Through the details of socio demographics variable, Clinical Variables of alcohol dependents and musical profile assessment will be collected from all the selected samples

- **Phase - 2:** Pre-test will be conducted among samples in both experimental and control group based on the inclusion criteria by using the following tools
  - Rosenberg Self-esteem scale
  - Depression, Anxiety, Stress – DASS 21
  - Pittsburgh Sleep Quality Index Scale (PSQI)
- Along with assessment of Physiological Parameters like pulse rate, respiration rate and Blood Pressure of alcoholics
- Phase - 3: Triple Interventional Package will be applied to the sample in the experimental group which includes the following
- 4, 7, 8 Breathing Techniques (Count in 15 Seconds 15 minutes)
- Receptive Music Listening (20 minutes)
- Assertive Training(45 minutes)

3.14 DATA COLLECTION SCHEDULE

Procedure for data collection

S.N	Procedure	Period
1.	IHEC	**July 2022**
2.	Pilot Study	**August 2022**
3.	Pilot Study Presentation & Main Study	**September 2022**
4.	Pretest for experimental group: socio demographic variables and questionnaire was distributed and physiological parameters were checked for about 45 minutes per patient	**October 2022**
5.	Pretest for control group: socio demographic variables and questionnaire was distributed and physiological parameters were checked for about 45 minutes per patient	**November 2022**
6.	Intervention for experimental group: Triple intervention package was administered to experimental group for about1 hr 20 minutes per day	**December 2022 to February 2023**
7.	Post test for experimental group: socio demographic variables and questionnaire was distributed and physiological parameters were checked for about 45 minutes per patient	**March 2023**
8.	Post test for control group: socio demographic variables and questionnaire was distributed and physiological parameters were checked for about 45 minutes per patient	**April 2023**
9.	Data Compilation	**May 2023**
10.	Data Analysis	**June 2023**
11.	Main Study Presentation	**July 2023**

3.15 PLAN FOR DATA ANALYSIS

Data obtained were analyzed in view of objectives of the study using descriptive and inferential statistics.

Descriptive statistics:

Phase 1

Socio demographic data, Clinical Variables and Music Profile Assessment of Alcoholics. Descriptive statistics include frequency and percentage distributions.

Phase 2

Assessment of pre-test and post-test level of stress, anxiety, depression, quality of sleep, self-esteem, selected physiological parameters among Patients with alcohol use disorder in experimental and control group. Descriptive statistics include frequency and percentage distributions, mean and standard deviation.

Inferential Statistics:

1. **Paired 't' and independent t test (comparison)** test will be used to evaluate the Effectiveness of Triple Interventional Package TIP on stress, Anxiety, Depression, Self-esteem and selected physiological parameters among patients with alcohol use disorder.

2. **Wilcoxon signed rank test and Wilcoxon Signed Ranks Test (comparison)**will Effectiveness of Triple Interventional Package TIP on quality of sleep among patients with alcohol use disorder.

3. **Chi-square test and Kruskalwallis Test**will be used to find out the Association between the pre-test level of stress, anxiety, depression and quality of sleep, self-esteem and selected physiological parameters with their selected demographic variables, Clinical Variables and Music Profile.

Pearson correlation r test will be used to correlate the relationship between stress, anxiety, depression, quality of sleep, self-esteem and selected physiological parameters among Patients with alcohol use disorder.

3.16 SUMMARY

This chapter provided a comprehensive overview of the research approach, setting, design, population, sample, sampling criteria, sampling technique, .It also detailed the development and description of the study instruments, including their content validity and reliability, ethical consideration, pilot study conducted, as well as the data collection procedure. Finally, the plan for data analysis was out lined, including the application of descriptive and inferential statistics to analyze the collected data.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

Analysis is a body of methods that help to describe facts, detect patterns, develop explanations and test hypotheses. Analysis was done from the samples collected and the findings from 150 (75 – Experimental Group and 75 – control group) patients with Alcohol Use Disorders who met Inclusion criteria are included here. In this chapter the study findings are grouped, analyzed and presented under the following headings.

4.1.1 SECTION A: Distribution of Demographic Variables of patients with Alcohol Use Disorders.

4.1.2 SECTION B: Distribution of Clinical Variables of patients with Alcohol Use Disorders.

4.1.3 SECTION C: Distribution of Music Profile Assessment of patients with Alcohol Use Disorders.

4.2.1 SECTION D: Assessment of pre-test and post-test level of stress, anxiety, depression, quality of sleep, self-esteem among Patients with alcohol use disorder in experimental and control group

4.2.2 SECTION E: Assessment of pre-test and post-test level of selected physiological parameters (pulse, respiration, Blood pressure) among Patients with alcohol use disorder in experimental and control group.

4.3 SECTION F: Effectiveness of Triple Interventional Package TIP on stress, Anxiety, Depression, Quality of Sleep, Self-esteem and selected physiological parameters among patients with alcohol use disorder.

4.4 SECTION G: Relationship between stress, anxiety, depression, quality of sleep, self-esteem and selected physiological parameters among Patients with alcohol use disorder.

4.5 SECTION H: Association between the pre-test level of stress, anxiety, depression and quality of sleep, self-esteem and selected physiological parameters with their selected demographic variables, Clinical Variables and Music Profile.

4.1.1 SECTION A: Distribution of Demographic Variables of patients with Alcohol Use Disorders

Depicts frequency and percentage distribution of demographic variables of patients with Alcohol Use Disorder in experimental and control group. Majority of patient with alcohol use disorder were 47 (62.7%) in experimental group and 53 (70.7%) in control group were belongs to age group of 31 – 40 years, 60 (80%) in experimental group and control group were belongs to Hindu, 26 (34.7%) in experimental group and control group were completed primary education, 36 (48%) in experimental group were married and 31 (41.3%) were single in control group.

In experimental group 55 (73.3%) and 45 (60%) in control group of them working in private sector, 43 (57.7%) in experimental group and 47 (62.7%) in control group of them living in rural area, 41 (54.7%) in experimental group and 39 (52%) in control group were belongs to nuclear family, 34 (45.3%) in experimental group and 31 (41.3%) in control group belongs to low socio economic status. 52 (69.3%) in experimental group and 48 (64%) in control group of them having two children, 39 (52%) in experimental group and 40 (53.3%) in control group of them earning Rs. 5,001 – 10,000, 75 (100%) in experimental group and control group were having family history of alcohol abuse or alcohol use disorder, 59 (78.7%) in experimental group and 51 (68%) in control group of them having other chronic physical illness.

The chi-square test was computed to establish the pair matching of variables between the groups. The calculated chi-square value was not found to be statistically significant at $p < 0.01$ level which clearly infers that homogeneity had been maintained for all the socio demographic variables.

4.1.2 SECTION B: Distribution of Clinical Variables of patients with Alcohol Use Disorders

Depicts frequency and percentage distribution of clinical variables of patients with Alcohol Use Disorder in experimental and control group. Majority of patient with alcohol use disorder who started alcohol at age of below 20 years were 40 (53.3%) in experimental group and control group, 49 (65.3%) in experimental group and 43 (57.3%) in control group belongs to family precipitating factors, 55 (73.3 %) in experimental group and 62 (82.7%) in control group were did not feel when they first consumed alcohol, 64 (85.3%) in experimental group and 59 (78.7%) in control group of them consumed alcohol everyday, 57 (76%) in experimental group and 62 (82.7%) in control group of them consumed 1000ml of alcohol per day, 64 (85.3%) in experimental group and 71 (94.7%) in control group of them spent above Rs. 1000 for alcohol consumption.

In experimental group 60 (80%) and 53 (70.7%) in control group of them did not consume other use of substances, 47 (62.7%) in experimental group and 49 (65.3%) in control group of them were not having any associative disturbances, 53 (70.7%) in experimental group and 52 (69.3%) in control group of them were not having effort to quite alcohol, 51 (68%) in experimental group and control group of them were not having history of abstinence, 51 (68%) in experimental group and 47 (62.7%) in control group of them were not having relapse, 63 (84%) in experimental group and control group of them were having previous de-addiction admission, 50 (66.7%) in experimental group and 49 (65.3%) in control group were having family history of alcohol abuse or alcohol use disorder, 59 (78.7%) in experimental group and 51 (68%) in control group of them were stayed for one month durations.

The chi-square test was computed to establish the pair matching of variables between the groups. The calculated chi-square value was not found to be statistically significant at $p < 0.01$ level which clearly infers that homogeneity had been maintained for all the clinical variables.

4.1.3 SECTION C: Distribution of Music Profile Assessment of patients with Alcohol Use Disorders.

Depicts frequency and percentage distribution of music profile assessment of patients with Alcohol Use Disorder in experimental and control group. Majority of patient with alcohol use disorder were enjoyed listening to music were 75 (100%) in experimental group and control group, 52 (69.3%) in experimental group and 54 (72%) in control group of them were having intentional effort to listen to music for everyday, 32 (42.7%) in experimental group and 34 (45.3%) in control group of them were listening to music for once in a day, 38 (50.7%) in experimental group and 46 (61.3%) in control group of them were listening to music when they feel sad, 75 (100%) in experimental group and control group of them were feeling stress free when they hear music. The chi-square test was computed to establish the pair matching of variables between the groups. The calculated chi-square value was not found to be statistically significant at $p < 0.01$ level which clearly infers that homogeneity had been maintained for all the music profile assessment of patient with alcohol use disorder.

Section F: Effectiveness of Triple Interventional Package (TIP) On Stress, Anxiety, Depression, Quality of Sleep, Self Esteem and Selected Physiological Parameters Among Patients with Alcohol Use Disorder

Table 4.3.1: Effectiveness of Triple Interventional Package (TIP) On Stress, Anxiety, Depression, Self Esteem Among Patients with Alcohol Use Disorder (Experimental Group)

N=150 (75 + 75)

S.No.	Variables	Experimental Group	Frequency (N)	Mean	Standard Deviation	Paired t – test	p- value
1	Stress	Pre test	75	11.76	2.247	26.015	<0.001 * HS
		Post test	75	4.19	1.182		
2	Anxiety	Pre test	75	11.11	2.419	27.155	<0.001 * HS
		Post test	75	2.77	0.798		
3	Depression	Pre test	75	10.99	2.334	25.723	<0.001 * HS
		Post test	75	3.2	1.013		
4	Self – esteem	Pre test	75	14.92	2.624	10.277	<0.001 * HS
		Post test	75	19.52	4.482		

*** p< 0.01, HS - Highly Significant**

Table 1 shows the mean score of Effectiveness of Triple Interventional Package (TIP) On Stress, Anxiety, Depression, Self- Esteem among Patients with Alcohol Use Disorder in **Experimental Group** shows statistically highly significant at $p < 0.01$ level. The result shows that Triple Interventional Package (TIP) has reduce the level of Stress, Anxiety, Depression, **and improves** the Self- Esteem among Patients with Alcohol Use Disorder in Experimental Group. **Hence the stated hypothesis H_1 was accepted.**

Table 4.3.2 Effectiveness of Triple Interventional Package (TIP) On Quality of sleep Among Patients with Alcohol Use Disorder (Experimental Group)

N=150 (75 + 75)

S.No.	Variables	Experimental Group	Frequency (N)	Mean	Median (IQR)	Wilcoxon Signed Ranked Test	p-value
1	Quality of Sleep	Pre test	75	11.01	11 (10,12)	-7.551	<0.001 * HS
		Post test	75	2.84	3 (2,3)		

*** p< 0.01, HS - Highly Significant**

Table 4.3.2 shows the mean score of Effectiveness of Triple Interventional Package (TIP) On **quality of sleep** among Patients with Alcohol Use Disorder in **Experimental Group**. Wilcoxon signed ranked test was applied to assess the effectiveness of Triple Interventional Package (TIP). Before intervention the median (IQR) was 11 (10, 12), where as after intervention is 3 (2,3). The calculated Wilcoxon signed ranked test value was -7.551 which shows statistically highly significant at $p < 0.01$ level. The result shows that Triple Interventional Package (TIP) had improved the quality of sleep among Patients with Alcohol Use Disorder in Experimental Group. **Hence the stated hypothesis H1 was accepted.**

Table 4.3.3 Effectiveness of Triple Interventional Package (TIP) On Selected Physiological Parameters among Patients with Alcohol Use Disorder (Experimental Group)

N=150 (75 + 75)

S.No.	Variables	Experimental Group	Frequency (N)	Mean	Standard Deviation	Paired t – test	p- value
1	**Systolic Blood Pressure**	**Pre test**	75	134.85	9.89	10.668	<0.001 * **HS**
		Post test	75	127.69	5.75		
2	**diastolic Blood Pressure**	**Pre test**	75	88.59	8.85	7.282	<0.001 * **HS**
		Post test	75	83.19	3.34		
3	**Pulse rate**	**Pre test**	75	94.64	12.52	13.441	<0.001 * **HS**
		Post test	75	88.64	10.08		
4	**Respiration rate**	**Pre test**	75	21.32	2.49	14.615	<0.001 * **HS**
		Post test	75	17.01	2.25		

*** p< 0.01, HS - Highly Significant**

Table 4.3.3 shows the mean score of Effectiveness of Triple Interventional Package (TIP) On selected physiological parameters (**systolic blood pressure, diastolic blood pressure, pulse, respiration**) among Patients with Alcohol Use Disorder in **Experimental Group** which shows statistically highly significant at $p < 0.01$ level. The result shows that Triple Interventional Package (TIP) had improved the **systolic blood pressure, diastolic blood pressure, pulse, respiration** among Patients with Alcohol Use Disorder in Experimental Group. **Hence the stated hypothesis H_2 was accepted.**

Table 4.3.4 Effectiveness of Triple Interventional Package (TIP) On Stress, Anxiety, Depression, Self Esteem Among Patients with Alcohol Use Disorder (Control Group)

N=150 (75 + 75)

S.No.	Variables	Control Group	Frequency (N)	Mean	Standard Deviation	Paired t – test	p-value
1	Stress	Pre test	75	12.4	2.547	-0.244	0.808 NS
		Post test	75	12.49	2.14		
2	Anxiety	Pre test	75	10.47	2.298	1.602	0.113 NS
		Post test	75	9.83	2.484		
3	Depression	Pre test	75	11.69	2.862	- 0.15	0.882 NS
		Post test	75	11.77	3.315		
4	Self – esteem	Pre test	75	13.99	2.855	1.945	0.056 NS
		Post test	75	13.07	2.947		

NS - Non Significant

Table 4.3.4 shows the mean score of Effectiveness of Triple Interventional Package (TIP) On **Stress**, **Anxiety**, **Depression and Self – esteem** among Patients with Alcohol Use Disorder in **control Group** shows statistically non-significant difference of Effectiveness of Triple Interventional Package (TIP) On Stress, Anxiety, Depression and Self – esteem among Patients with Alcohol Use Disorder in Control Group.

Table 4.3.5 Effectiveness of Triple Interventional Package (TIP) On Quality of sleep Among Patients with Alcohol Use Disorder (Control Group)

N=150 (75 + 75)

S.No.	Variables	Control Group	Frequency (N)	Mean	Median (IQR)	Wilcoxon signed rank test	p-value
1	Quality of sleep	Pre test	75	11.01	11 (10, 12)	-0.953	0.340 NS
		Post test	75	11.45	11 (10, 13)		

NS - Non Significant

Table 4.3.5 shows the mean score of Effectiveness of Triple Interventional Package (TIP) On **quality of sleep** among Patients with Alcohol Use Disorder in **control Group** shows statistically non-significant difference of Effectiveness of Triple Interventional Package (TIP) On quality of sleep among Patients with Alcohol Use Disorder in Control Group.

Table4.3.6 Effectiveness of Triple Interventional Package (TIP) On Selected Physiological Parameters Among Patients with Alcohol Use Disorder (Control Group)

N=150 (75 + 75)

S.No.	Variables	Control Group	Frequency (N)	Mean	Standard Deviation	Paired t – test	p-value
1	**Systolic Blood Pressure**	**Pre test**	75	136.23	13.55	-1.489	0.141 **NS**
		Post test	75	138	16.08		
2	**Diastolic Blood Pressure**	**Pre test**	75	91.07	7.96	-1.013	0.314 **NS**
		Post test	75	91.96	9.96		
3	**Pulse Rate**	**Pre test**	75	94.33	11.63	-1.115	0.268 **NS**
		Post test	75	95.12	11.05		
4	**Respiration Rate**	**Pre test**	75	20.43	3.68	-0.945	0.348 **NS**
		Post test	75	20.64	3.31		

NS - Non Significant

Table 4.3.6 shows the mean score of Effectiveness of Triple Interventional Package (TIP) On selected physiological parameters (**systolic blood pressure, diastolic Blood Pressure, pulse, respiration**) among Patients with Alcohol Use Disorder in **control Group** shows statistically non-significant difference of Effectiveness of Triple Interventional Package (TIP) On selected physiological parameters (**systolic blood pressure, diastolic Blood Pressure, pulse, respiration**) among Patients with Alcohol Use Disorder in Control Group.

Section G: 4.4.1 Relationship Between the Level of Stress, Anxiety, Depression, Quality of Sleep, Self-Esteem and Selected Physiological Parameters Among Patients with Alcohol Use Disorder

Among patients with alcohol use disorder, there are significant relationships between various psychological and physiological factors. There was a positive correlation between anxiety and Sleep component 6 - **Use of sleep medication** (0.203) and Sleep score (0.163). Similarly, better self-esteem is linked to better sleep quality, as indicated by the positive correlation with Sleep component 2 - **Sleep latency** (0.195). In terms of physiological parameters, there is a significant strong positive correlation between systolic and diastolic blood pressure, highlighting the inter connectedness of these measures. Other physiological parameters such as respiration rate, and pulse rate also show significant positive correlations with systolic blood pressure. Sleep components and scores had significant positive correlations observed among different sleep components and scores. These findings suggest that stress, anxiety, depression, self-esteem, and sleep quality are positively correlated in patients with alcohol use disorder, and physiological parameters are also influenced by these factors.

4.4.2 Regression Analysis For Quality Of Sleep Among Patients With Alcohol Use Disorder

Regression analysis was done for Pittsburgh Sleep Quality Index (PSQI) with various independent factors (depression, sleep component 1(**Subjective sleep quality)**, sleep component 2(**Sleep latency)**, sleep component 3(**Sleep duration)**, sleep component 4(**Sleep efficiency)**, sleep component 5(**Sleep disturbance**) which are highly influencing the quality of sleep.

Section H: Association between the pre-test level of stress, anxiety, depression and quality of sleep, self-esteem and selected physiological parameters with their selected demographic variables, Clinical Variables and Music Profile.

There is significant association between the pre test level of **Physiological Parameters** (Pulse Rate)with their **selected socio demographic variables** such as **Occupationat *p<0.01*** with the mean score of 95.31 had working in private sector. It shows that patient with alcohol use disorder those who had working in private sector having tachycardia than those who are working in government sector and unemployed.

There is significant association between the pre test level of **self esteem**of patient with alcohol use disorder with **selected clinical variables**such as **previous de – addiction admission at *p<0.01*** with the mean score of 14.71 had previous de – addiction admission. It shows that patient with alcohol use disorder those who had previous de – addiction admission have low self esteem than those who were not admitted in de addiction centers.

There is significant association between the pre test level of **selected physiological parameters** (diastolic blood pressure) of patient with alcohol use disorder with **selected clinical variables**such as **duration of stayat *p<0.01*** with the mean score of 90.89 had admitted for 1 month admission in de addiction centres. It shows that patient with alcohol use disorder those who had 1 month admission have high blood pressure than those who were admitted for 2 months and more in de addiction centers.

SUMMARY

The Analysis and Interpretation of data will provide valuable insights into the effectiveness of triple interventional package (4,7,8 breathing technique, receptive music listening and assertive training) for stress, anxiety, depression, self esteem, quality of sleep and selected physiological parameters of patient with alcohol use disorder was compared with those who are getting interventions (control group).

CHAPTER V

MAJOR FINDINGS AND DISCUSSION

This chapter provides a concise summary of the research study, high lighting the major findings and discussion. The research findings including the effectiveness of Triple intervention Package on selected demographic and clinical variables, music profile assessment. The discussion explores the significance of these findings and their relevance to nursing practice.

5.1Comparison of experimental and control group based on demographic variables

Comparing the demographic variables between experimental and control group, it can be observed that both groups exhibit similar parameters. In terms of demographic variables, Age in years, Gender, Religion, Educational status, Marital status, Occupation, Residence, Type of Family, Socio economic status, Number of Children, Monthly Income, Family history of alcohol abuse or use disorders, History of chronic physical illness are comparable between the two groups. By including participants from both groups, the study can capture a broader range of characteristics and enhance the generality of the findings.

5.2 Comparison of experimental and control group based on clinical variables

Comparing the clinical variables between experimental and control group, it can be observed that both groups exhibit similar parameters. In terms of clinical variables, Age At Starting Of Alcohol, Precipitating Factor, Feeling When You First Consumed Alcohol, Frequency of alcohol consumptions, Amount Of Alcohol Consumed Per Day, Money Spent On Alcohol Consumption, Any Other Use of Substances, Associative Disturbances, Efforts To Quit Alcohol, History Of Abstinence, Relapse, Previous Deaddiction Admission, Duration of Stay are comparable between the two groups. By including participants from both groups, the study can capture a broader range of characteristics and enhance the generality of the findings.

5.3 Comparison of experimental and control group based on music profile assessment

Comparing the music profile assessment between experimental and control group, it can be observed that both groups exhibit similar parameters. In terms of music profile assessment, Do you enjoy listening to music, Do you make an intentional effort to listen to music everyday, how often do you listen to music, You listen to music when you feel, Are your feel stress free when you hear music are comparable between the two groups. By including participants from both groups, the study can capture a broader range of characteristics and enhance the generality of the findings.

5.4 Comparison of experimental and control group based on Effectiveness of triple intervention package on depression, anxiety and stress among patient with alcohol use disorder

In this study shows the mean score of effectiveness of triple intervention package on depression, anxiety and stress among patient with alcohol use disorder. In pre – test the mean and standard value of stress, anxiety and depression in experimental were 11.76 $\pm$ 2.247, 11.11 $\pm$ 2.419 and 10.99 $\pm$ 2.334 respectively. In pre – test the mean and standard value of stress, anxiety and depression in control group were 12.4 $\pm$ 2.547, 10.47 $\pm$ 2.298 and 11.69 $\pm$ 2.862 respectively. In post test the mean and standard deviation value of stress, anxiety and depression in experimental were 4.19 $\pm$ 1.182, 2.77 $\pm$ 0.798 and 3.2 $\pm$ 1.013 respectively. In post test the mean and standard deviation value of stress, anxiety and depression in control group were 12.49 $\pm$ 2.14, 9.83 $\pm$ 2.484 and 11.77$\pm$ 3.315 respectively. The calculated paired t test value of stress, anxiety and depression for experimental group were 26.015, 27.155 and 9.277. While comparing experimental and control group during the pre - test and post test indicates that Triple Intervention Package was statistically significant in reducing the level of stress, anxiety and depression at $p< 0.01$. This finding aligns with a study of Silverman to find the effects of Music Therapy on Depression anxiety and stress on Clients in Detoxification which shows significantly reduced after participating in the music therapy sessions ($p< 0.05$).

5.5 Comparison of experimental and control group based on Effectiveness of triple intervention package on self esteem among patient with alcohol use disorder

In this study shows the mean score of effectiveness of triple intervention package on self esteem among patient with alcohol use disorder. In pre – test the mean and standard value of **self esteem**in experimental and control group were 14.92 $\pm$ 2.264 and 13.99 $\pm$ 2.855 respectively. In post test the mean and standard deviation value of experimental and control group were 19.52 $\pm$ 4.482and 13.07$\pm$ 2.947. The calculated paired t test value for experimental and control group were 10.277 and 1.945. While comparing experimental and control group during the pre - test and post test indicates that Triple Intervention Package was statistically significant in improving the level of self esteem at $p< 0.01$. This finding aligns with a study of Dr. Vijayalakshmi K to find the Effectiveness of Assertiveness Training among Alcoholic Patients of selected De-addiction centers which was found statistically significant at $p< 0.001$ and there was a significant association between the duration of alcohol dependence at $p <0.05$.

5.6 Comparison of experimental and control group based on Effectiveness of triple intervention package on quality of sleep among patient with alcohol use disorder

In this study shows the mean score of effectiveness of triple intervention package on quality of sleep among patient with alcohol use disorder. In pre – test the mean and median value of **quality of sleep** in experimental and control group were 11.01, 11 (10,12) and 11.01, 11 (10,12)respectively. In post test the mean and standard deviation value of experimental and control group were 2.84, 3 (2,3) and 11.45, 11 (10,13). The calculated Wilcoxon signed rank test value for experimental and control group were -7.551 and -0.953. While comparing experimental and control group during the pre - test and post test indicates that Triple Intervention Package was statistically significant in improving the quality of sleep at $p< 0.01$.

This finding aligns with a study of Zheng D et.al conducted a community based study on Alcohol consumption and sleep quality which shows Higher alcohol consumption was associated with worse overall sleep quality ($p < 0{\cdot}001$).

5.7 Comparison of experimental and control group based on Effectiveness of triple intervention package on selected physiological parameters (blood pressure, pulse rate and respiration rate) among patient with alcohol use disorder

In this study shows the mean score of effectiveness of triple intervention package on **selected** physiological parameters (blood pressure, pulse rate and respiration rate) among patient with alcohol use disorder. In pre – test the mean and standard value of systolic blood pressure, diastolic blood pressure, pulse rate and respiration rate**134.85 ± 9.89, 88.59 ± 8.85, 94.64 ± 12.52** were and 21.32 ± 2.49 respectively. In pre – test the mean and standard value of systolic blood pressure, diastolic blood pressure, pulse rate and respiration ratein control group were 127.69 ±5.75, 91.07 ± 7.96, 94.33 ± 11.63 and 20.43± 3.68 respectively. In post test the mean and standard deviation value of systolic blood pressure, diastolic blood pressure, pulse rate and respiration rate in experimental 127.69 ± 5.75, 83.19 ± 3.34, 88.64 ± 10.08 were and 17.01 ± 2.25 respectively. In post test the mean and standard deviation value of systolic blood pressure, diastolic blood pressure, pulse rate and respiration ratein control group 138± 16.08, 91.96± 9.96, 95.12± 11.05 were and 20.64± 3.31 respectively. The calculated paired t test value of systolic blood pressure, diastolic blood pressure, pulse rate and respiration ratefor experimental group 10.668, 7.282, 13.441and 14.615. While comparing experimental and control group during the pre - test and post test indicates that Triple Intervention Package was statistically significant in improving the level of systolic blood pressure, diastolic blood pressure, pulse rate and respiration rate at $p< 0.01$. This finding aligns with a study of Vierra J et. al to find the effects of sleep deprivation and 4-7-8 breathing control on heart rate variability, blood pressure among alcoholic patients which shows both groups had significantly decreased HR and systolic BP ($p < 0.05$). HRV, HR, and BP variables showed no significant differences between the groups.

5.8 Association between the pre-test level of stress, anxiety, depression, quality of sleep, self-esteem and selected physiological parameters with their selected socio demographic variables, clinical variables and music profile assessment.

The data reveals that there is an association between the level of selected physiological parameters (Pulse Rate) of patient with alcohol use disorder with selected socio demographic variables such as occupation at $p < 0.01$. **Hence stated hypothesis H_4 was accepted.**

The data reveals that there is an association between the level of self esteem of patient with alcohol use disorder with selected clinical variables such as previous de – addiction admission at $p < 0.01$. **Hence stated hypothesis H_4 was accepted.**

The data reveals that there is an association between the level of selected physiological parameters (diastolic blood pressure) of patient with alcohol use disorder with selected clinical variables such as duration of stay at $p < 0.01$. **Hence stated hypothesis H_4 was accepted.**

This finding was supported by the following research findings, Sathiyakani conducted study to find Effectiveness of calisthenics on psychological parameters among alcohol which shows significant association between the depression and stress at $p < 0.05$. Schick, et.al conducted a cross sectional study on factor structure of self-esteem and its association with alcohol use in American Indian (AI) adolescents which reveals Multilevel regression analyses revealed that, with both factors entered into the model, intrapersonal self-esteem was negatively associated with alcohol consumption and alcohol-related problems, while interpersonal self-esteem was positively associated with alcohol consumption ($p<0.001$) and higher alcohol-related problems ($p= 0.002$).

5.9 Summary

This chapter provides major findings and a discussion of results, which are organized into different sections and headings. Descriptive and inferential statistics were employed to analyse the data in accordance with the study objectives and hypotheses. Furthermore, the findings derived from these statistical analyses shed light on the relationships between the variables examined in this study and contribute to a deeper understanding of the research topic.

CHAPTER VI

SUMMARY AND CONCLUSION

This chapter provides a concise summary of the research study, highlighting the implications and recommendations for further research directions.

6.1 SUMMARY

This research aimed to evaluate the effectiveness of Triple Interventional Package (TIP) on Stress, Anxiety, Depression, Quality of Sleep, Self esteem and Selected Physiological Parameters among Patients with Alcohol Use disorders. Compare the effectiveness, correlate the effectiveness and associate with socio demographic variables, clinical variables, music profile assessment.

6.2 CONCLUSION

The study proves that Triple Interventional Package (TIP) (4, 7, 8 breathing techniques, receptive music listening , assertive training) was statistically significant in reduction of stress, anxiety, depression and improves in self esteem, selected physiological parameters (blood pressure, respiration rate and pulse rate) and enhances the quality of sleep among the patient with alcohol use disorder in selected de - addiction centre.

REFERENCES

1. R. Sreevani. A Guide To Mental Health And Psychiatric Nursing. 4th Edition. New Delhi: Jaypee Brothers Medical Publication; 2016. Page No. 267 – 280.
2. World health organisation. Harmful use of alcohol kills more than 3 million people each year, most of them men. 2018. https://www.who.int/news/item/21-09-2018-harmful-use-of-alcohol-kills-more-than-3-million-people-each-year--most-of-them-men
3. Alcohol consumption in India: trends across states, age groups. The indian express journalism of courage. New delhi. 2022. https://indianexpress.com/article/explained/alcohol-consumption-in-india-trends-across-states-age-groups-7920871/
4. Dharani, E. Assessment of risk factors for relapse among alcohol dependent individuals: A Comparative study. Masters thesis, Government Mohan Kumaramangalam Medical College, Salem; 2022. http://repository-tnmgrmu.ac.in/id /eprint/16904
5. World Health Organisation. Alcohol: Health Tips. https://www.who.int/health-topics/alcohol#tab=tab_1
6. Alcohol use. NCD Alliance. https://ncdalliance.org/why-ncds/risk-factors-prevention/ alcohol-use
7. World Health Organisation. Alcohol. May 2022. https://www.who.int/news-room/fact-sheets/detail/alcohol
8. Hasin D. Classification of alcohol use disorders. Alcohol Res Health. 2003;27(1):5-17. PMID: 15301396; PMCID: PMC6676702.
9. Alcohol and depression. Addiction center. https://www.addictioncenter.com/alcohol/ alcohol-depression/#:~:text=At%20least%2030%25%2D40,of%20the%20symptoms%20of%20depression.
10. Timothy J, KristeenCherney. Alcohol and Anxiety.2019. https://www.healthline.com/health/alcohol-and-anxiety
11. Ipser JC, Wilson D, Akindipe TO, Sager C, Stein DJ. Pharmacotherapy for anxiety and comorbid alcohol use disorders. Cochrane Database Syst Rev. 2015; 20(1):CD007505. doi:10.1002/14651858.CD007505.pub2
12. National Institute on Alcohol Abuse and Alcoholism. Alcohol Alert. The link between stresszand alcohol. Number 85. https://pubs.niaaa.nih.gov/publications/AA85/ AA85.htm
13. Alcohol Rehab Guide. Alcohol and Self – esteem. https://www.alcoholrehabguide.org/resources/dual-diagnosis/alcohol-and-self-esteem/
14. Ajitha Nancy Rani R, Hemavathy V. self esteem in alcoholism. Natural Volatiles and Essential Oils. 2021; 8 (4): 2274 – 2278.
15. Matthew Loux. How sleeping well enhances police performances. American military university. UGUST 2018. https://www.police1.com/health-

wellness/articles/how-sleeping-well-enhances-police-performance-cjtP1LHEFmpzhSSN/

16. Zhabenko N, Wojnar M, Brower K J. Prevalence and correlates of insomnia in a polish sample of alcohol-dependent patients. Alcoholism Clinical & Experimental Research. 2012; 36(9): 1600–1607. 10.1111/j.1530-0277.2012.01771.x
17. Ramanan VV, Singh SK. A study on alcohol use and its related health and social problems in rural Puducherry, India. J Family Med Prim Care. 2016 Oct-Dec;5(4):804-808. doi: 10.4103/2249-4863.201175. PMID: 28348995; PMCID: PMC5353818.
18. Francisco Lopez-Jimenez. Alcohol: Does it affect blood pressure?.https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/ blood-pressure/faq-20058254
19. Alcohol and cardiovascular disease. Alcohol think again. https://alcoholthinkagain.com.au/alcohol-your-health/alcohol-and-long-term-health/ alcohol-and-cardiovascular-disease/
20. Anahad O' Connor. Can drinking alcohol raise your heart rate? New York Times. 2021. https://www.nytimes.com/2021/09/28/well/eat/alcohol-heart-rate-effects.html
21. Barclay, G., Barbour, J., Stewart, S., Day, C., &Gilvarry, E. Adverse physical effects of alcohol misuse. Advances in Psychiatric Treatment. 2008; 14 (2): 139-151. doi:10.1192/apt.bp.105.001263
22. Simou, E., Britton, J., &Leonardi-Bee, J. Alcohol and the risk of sleep apnoea: A systematic review and meta-analysis. Sleep Medicine. 2018; 42: 38–46., https://pubmed.ncbi.nlm.nih.gov/29458744/
23. Nicole Miller. The role of complementary therapies in addiction treatment. https://www.priorygroup.com/blog/the-role-of-complementary-therapies-in-addiction-treatment
24. Jenna Fletcher. How to use 4-7-8 breathing for anxiety. https://www.medicalnewstoday.com/articles/324417
25. Music therapy. UK Addiction Treatment centres. 2022. https://www.ukat.co.uk/rehab-treatment/therapies/music-therapy/

APPENDIX

ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 11, Issue, 04, pp.3376-3383, April, 2019

DOI: https://doi.org/10.24941/ijcr.35073.04.2019

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

EFFECTIVENESS OF CALISTHENICS ON PSYCHOLOGICAL PARAMETERS AMONG ALCOHOL DEPENDENTS

***Subbiah Sathiyakani, Prabavathy, S. and Dr. Renuka, K.**

Department of Mental Health Nursing, Kasturba Gandhi Nursing College, Sri Balaji Vidyapeeth, Puducherry

ARTICLE INFO

Article History:
Received 30th January, 2019
Received in revised form
06th February, 2019
Accepted 15th March, 2019
Published online 30th April, 2019

Key Words:
Alcohol Dependents,
Calisthenics, Stress,
Anxiety, Depression.

**Corresponding author:*
Subbiah Sathiyakani

ABSTRACT

Background: Alcoholism is one of the major public health issues in both developed and developing countries. The harmful use of alcohol cause approximately 3.3 million deaths every year. Alcohol dependence is a chronic disease, in which a person craves for drinks that contain alcohol and is unable to control his drinking habit. Calisthenics exercise has been known to improve mental health while treating problems like Depression, Stress and Anxiety. **Aim:** To evaluate the Effectiveness of Calisthenics on Psychological parameters among alcohol dependents. **Materials and Methods**: True Experimental Research design was used for this study. Initially, 66 Patients were selected by Simple Random Sampling Technique. Among them, 33 samples were placed in the experimental group, who practised Calisthenics and the other 33 were placed in the control group, who received the routine treatment. The data were collected by using DASS- 21 scale questionnaire in pre-test and post-test, organized and analysed. **Results:** In both the groups, statistically highly significant results ($p<0.001$) were observed and most of the psychological parameters improved positively in the experimental group than the control group. Significant results were observed in the psychological parameters along with DASS-21 Scale scoring. **Conclusion:** This study findings indicated that the Calisthenics intervention proved to be statistically highly significant in the reduction of Psychological parameters among the Alcohol dependents under study.

TOOL

PART-I-A

A: SOCIO DEMOGRAPHIC VARIABLES

1. Age in years _____
2. Gender
    a. Male
    b. Female
    c. Transgender
3. Religion
    a. Hindu
    b. Muslim
    c. Christian
    d. Others
4. Educational status_____
5. Marital status
    a. Married
    b. Divorced
    c. Single
    d. Widow/widower
6. Occupation
    a. Govt Sector
    b. Private Sector
    c. Unemployed
7. Residence
    a. Urban
    b. Rural
8. Type of Family
    a. Nuclear family
    b. Joint family
9. Socio economic status
    a. Low
    b. Middle
    c. High class
10. Number of Children
    a. 1
    b. 2
    c. 3 and above

11. Monthly Income
    a. 3000-5000
    b. 6000-10000
    c. 10000 and above
12. Family history of alcohol abuse or use disorders
    a. Yes
    b. No
13. History of chronic physical illness
    a. Diabetes Mellitus
    b. Blood Pressure
    c. Any other, specify ……

Part-I B

B: Clinical Variables of Alcoholics

1. Age At Starting Of Alcohol_____
2. Precipitating Factor:
    a) Family
    b) Unemployed
    c) Peer Pressure
    d) Any other personal reasons
3. Feeling When You First Consumed Alcohol
    a) Yes
    b) No
4. Frequency of alcohol consumptions
    a) Everyday
    b) Several times a week
    c) Once a week
    d) Once a month
    e) Less than once a month
5. Amount Of Alcohol Consumed Per Day:
    a) 100-300ml
    b) 500-1000ml
    c) 1000ml and above
5. Money Spent On Alcohol Consumption:
    a) Rs.100 -500
    b) Rs.600-1000
    c) Rs.1000 and above

6. Any Other Use of Substances:
    a) Yes, if specify _____
    b) No
7. Associative Disturbances:
    a) Yes, if specify_____
    b) No
8. Efforts To Quit Alcohol :
    a) Yes
    b) No
9. History Of Abstinence :
    a) Yes
    b) No
10. Relapse :
    a) Yes
    b) No
11. Previous Deaddiction Admission :
    a) Yes
    b) No
12. Duration of Stay:
    a) 1 month
    b) 2month
    c) 2month and above

Part-I C

C. MUSIC PROFILE ASSESSMENT

1. Do you enjoy listening to music?
   Yes No
2. Do you make an intentional effort to listen to music everyday?
   Yes No
   If YES, how often do you listen to music?
   Four times a day Three times a day Twice a day Once a day Other (pl. specify)
3. You listen to music when you feel (feel free to choose multiple options, if necessary)
   Happy Sad Angry Others (Please Specify) …….
4. Are your feel stress free when you hear music
    a) Yes
    b) No

Part – II - 1

ROSENBERG SELF-ESTEEM SCALE

Description of Measure

A 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self. The scale is believed to be uni-dimensional. All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree.

Instructions Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

S.No.	ITEMS	Relevant	Need Modification	Not Relevant	Suggestions
1.	On the whole, I am satisfied with myself.				
2.	At times I think I am no good at all.				
3.	I feel that I have a number of good qualities.				
4.	I am able to do things as well as most other people.				
5.	I feel I do not have much to be proud of.				
6.	I certainly feel useless at times.				
7.	I feel that I'm a person of worth, at least on an equal plane with others.				
8.	I wish I could have more respect for myself.				
9.	All in all, I am inclined to feel that I am a failure				
10	I take a positive attitude toward myself.				

Interpretation of Scoring

For item 1,2,4,6 and 7	For items 3,5,8,9 and 10
Strongly agree=3	Strongly agree=0
Agree= 2	Agree= 1
Disagree=1	Disagree=2
Strongly disagree=0	Strongly disagree=3

- The scale ranges from 0-30.
- Scores between 15 and 25 are within normal range.
- Scores below 15 suggest low self-esteem.

Part – II - 2

DEPRESSION ANXIETY STRESS SCALE – 21: ASSESSMENT TOOL

Name: **Date:**

INSTRUCTIONS

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree or a good part of time
3 Applied to me very much or most of the time

S.No.	Items	Relevant	Need Modification	Not Relevant	Suggestions
1(s)	I found it hard to wind down				
2(a)	I was aware of dryness of my mouth				
3(d)	I couldn't seem to experience any positive feeling at all				
4(a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physicalexertion)				
5(d)	I found it difficult to work up the initiative to do things				
6(s)	I tended to over-react to situations				
7(a)	I experienced trembling (e.g. in the hands)				
8(s)	I felt that I was using a lot of nervous energy				
9(a)	I was worried about situations in which I might panic and make a fool of myself				
10 (d)	I felt that I had nothing to look forward to				
11(s)	I found myself getting agitated				
12(s)	I found it difficult to relax				
13(d)	I felt down-hearted and blue				
14(s)	I was intolerant of anything that kept me from getting on with what I was doing				
15(a)	I felt I was close to panic				
16(d)	I was unable to become enthusiastic about anything				
17(d)	I felt I wasn't worth much as a person				
18(s)	I felt that I was rather touchy				
19(a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)				
20(a)	I felt scared without any good reason				
21(d)	I felt that life was meaningless				

Interpretation of scoring

The score on DASS-21 will need to be multiplied by 2 to calculate the final score.

CATEGORY	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
ExtremelySevere	28+	20+	34+

Part – II - 3

SLEEP QUALITY SCALE

Description of Measure

It Consist of 28 items, the SQS evaluates six domains of sleep quality: daytime symptoms, restoration after sleep, problems initiating and maintaining sleep, difficulty waking, and sleep satisfaction. All items are answered using a 4-point Likert scale format ranging from Rarely to Almost Always.

Instructions

Please read each statement and (√) appropriate statement applied to you. There are no right or wrong answers. Do not spend too much time on any statement. Respondents indicate how frequently they exhibit certain sleep behaviors (0 = "rare," 1 = "sometimes," 2 = "often," and 3 = "almost always").

S.No.	Items	Relevant	Need Modification	Not Relevant	Suggestions
1.	I have difficulty falling asleep				
2.	I fall into a deep sleep				
3.	I wake up while sleeping				
4.	I have difficulty getting back to sleep once I wake up in middle of the night				
5.	I wake up easily because of noise				
6.	I toss and turn				
7.	I never go back to sleep after awakening during sleep				
8.	I feel refreshed after sleep				
9.	I feel unlikely to sleep after sleep				
10.	Poor sleep makes me irritated				
11.	Poor sleep gives me headaches				
12.	I would like to sleep more after waking up				
13.	My sleep hours are enough				
14.	Poor sleep makes me lose my appetite				
15.	Poor sleep makes hard for me to think				
16.	I feel vigorous after sleep				
17.	Poor sleep makes me lose interest in work or others				
18.	My fatigue is relieved after sleep				
19.	Poor sleep causes me to make mistakes at work				
20.	I am satisfied with my sleep				
21.	Poor sleep makes me forget things more easily				
22.	Poor sleep makes it hard to concentrate at work				
23.	Sleepiness interferes with my daily life				
24.	Poor sleep makes me lose desire in all things				
25.	I have difficulty getting out of bed				
26.	Poor sleep makes me easily tired at work				
27.	I have a clear head after sleep				
28.	Poor sleep makes my life painful				

Interpretation of Scoring

Scores on items belong to factors 2 and 5 (restoration after sleep and satisfaction with sleep) and are reversed before being tallied. Total scores can range from 0 to 84, with higher scores demoting more acute sleep problems.

Suggestion and Comments

Thank you for your valuable comments and feedback

*****